

What is claimed is:

1 1. A loop diagnosis system for disk array apparatuses
2 comprising:

3 a recording unit having a plurality of loops for executing
4 instructions from a host unit and a plurality of recording media;

5 a loop monitoring unit for detecting any abnormality in
6 any of said loops; and a loop controller for controlling said
7 loops according to the result of monitoring by said loop
8 monitoring unit.

1 2. The loop diagnosis system for disk array apparatuses,
2 as claimed in Claim 1, wherein:

3 said loop controller, if said loop monitoring unit detects
4 any abnormality in a specific loop, suspends the execution of
5 any instruction in said specific loop.

1 3. The loop diagnosis system for disk array apparatuses,
2 as claimed in Claim 2, wherein:

3 said loop controller, after suspending the execution of
4 any instruction in said specific loop, substitutes another loop
5 than said specific loop for further execution of the instruction
6 done by said specific loop until then.

1 4. The loop diagnosis system for disk array apparatuses,
2 as claimed in Claim 3, wherein:

3 said loop controller, after substituting the execution
4 of the instruction previously done by said specific loop,

5 diagnoses said specific loop.

1 5. The loop diagnosis system for disk array apparatuses,
2 as claimed in Claim 4, wherein:

3 said loop controller, after diagnosing said specific loop,
4 severs a specific one of said recording media from said specific
5 loop.

1 6. The loop diagnosis system for disk array apparatuses,
2 as claimed in Claim 5, wherein:

3 said loop controller, after severing said recording
4 medium from said specific loop, releases the execution of any
5 instruction by said specific loop from suspension.

1 7. The loop diagnosis system for disk array apparatuses,
2 as claimed in Claim 6, further includes:

3 a maintenance terminal for entering information
4 equivalent to the result of monitoring by said loop monitoring
5 unit from elsewhere than said plurality of loops, wherein said
6 loop controller controls said loops according to information
7 entered into said maintenance terminal.

1 8. The loop diagnosis system for disk array apparatuses,
2 as claimed in Claim 7, wherein:

3 said maintenance terminal displays information extracted
4 from said loop controller.

1 9. A loop diagnosis method applicable to a loop diagnosis

2 system for disk array apparatuses having a plurality of loops
3 for executing instructions from a host unit and a plurality
4 of recording media, including:

5 a loop monitoring step to detect any abnormality in any
6 of said loops; and

7 a loop control step to control said loops according to
8 the result of monitoring at said loop monitoring step.

1 10. The loop diagnosis method for disk array apparatuses,
2 as claimed in Claim 9, wherein:

3 at said loop control step, if any abnormality in a specific
4 loop is detected at said loop monitoring step, the execution
5 of any instruction in said specific loop is suspended.

1 11. The loop diagnosis method for disk array apparatuses,
2 as claimed in Claim 10, wherein:

3 at said loop control step, after suspending the execution
4 of any instruction in said specific loop, another loop than
5 said specific loop is substituted for further execution of the
6 instruction done by said specific loop until then.

1 12. The loop diagnosis method for disk array apparatuses,
2 as claimed in Claim 11, wherein:

3 at said loop control step, after substituting the
4 execution of the instruction previously done by said specific
5 loop, said specific loop is diagnosed.

1 13. The loop diagnosis method for disk array apparatuses,

2 as claimed in Claim 12, wherein:

3 at said loop control step, after diagnosing said specific
4 loop, a specific one of said recording media is severed from
5 said specific loop.

1 14. The loop diagnosis method for disk array apparatuses,
2 as claimed in Claim 13, wherein:

3 at said loop control step, after severing said recording
4 medium from said specific loop, the execution of any instruction
5 by said specific loop is released from suspension.

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